

Math 7

Number Sense

Students in Math 7 develop meaningful understanding of whole numbers, decimals, fractions, percents, and positive and negative numbers, and the relationships among them. They will compute fluently and solve problems.

Examples: $\frac{3}{5} - \frac{1}{2}$

Write 32,000,000 in scientific notation

Proportional Reasoning

Students solve problems involving ratios, rates, proportions and percentages. They will convert from one unit of measurement to another and create and interpret scale drawings.

Examples: Find 10% of 278

Convert 52 cm to mm

Algebra

Students evaluate and simplify expressions and solve equations. They will use algebraic symbols. Students will graph points.

Examples: Solve $2x - 5 = 9$

Simplify and evaluate $3(x - 2) + 4x$ if $x = 5$

Geometry and Measurement

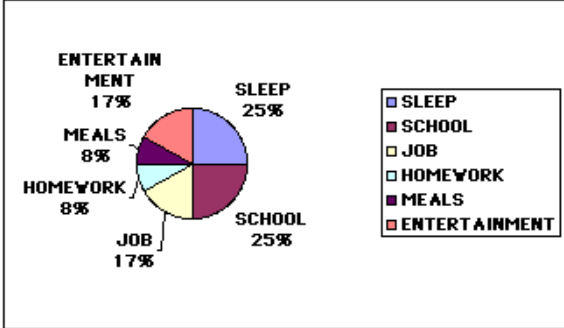
Students draw, label, and describe geometric figures and begin looking for relationships among them. Students will measure real life objects using a variety of measurement scales and formulas.

Examples: Find an angle supplementary to an angle whose measure is 42° .
Find the area of a circle whose radius is 15 m.

Probability and Statistics

Students conduct simple probability experiments and compare results with theoretical probability. Students will collect and display data in tables, scatter plots and circle graphs.

Examples: Flip a coin 50 times and record the results. How does this compare with what you would expect. Why?
Construct a circle graph showing how you spend the hours of your day.

Number Sense															
$\frac{3}{5} - \frac{1}{2} = \left(\frac{2}{2}\right)\left(\frac{3}{5}\right) - \left(\frac{5}{5}\right)\left(\frac{1}{2}\right) =$ $\frac{6}{10} - \frac{5}{10} = \frac{1}{10}$	<p>Write 32,000,000 in scientific notation:</p> 3.2×10^7														
Proportional Reasoning															
<p>Find 10% of 278:</p> $\frac{10}{100} \times 278 = 27.8$	<p>Convert 52 cm to mm:</p> $52 \cancel{\text{cm}} \times \frac{10\text{mm}}{1\cancel{\text{cm}}} = 520\text{mm}$														
Algebra															
$2x - 5 = 9$ $2x - 5 + 5 = 9 + 5$ $2x = 14$ $\frac{2x}{2} = \frac{14}{2}$ $x = 7$	<p>Simplify and evaluate</p> $3(x - 2) + 4x \text{ if } x = 5$ $3(5 - 2) + 4(5)$ $3(3) + 20$ $9 + 20$ 29														
Geometry and Measurement															
<p>Find an angle supplementary to an angle whose measure is 42°</p> $180 - 42 = 138$	<p>Find the area of a circle whose radius is 15 m.</p> $A_{\square} = \pi r^2$ $A = \pi(15)^2$ $= 225\pi \approx \frac{4950}{7} \approx 706.5$														
Probability and Statistics															
<p>Flip a coin 50 times and record the results. How does this compare with what you would expect? Why?</p> <p><i>You would expect about 25 heads and 25 tails. The result will most likely be different. Discuss.</i></p>	<p>Construct a circle graph showing how you spend the hours of your day.</p> $\text{Hours} \times \frac{1}{24} \times 360 = \text{degrees}$ $\frac{\text{degrees}}{360} = \text{percent}$ <p>Percent of Hours of a Day Spent on Activities</p>  <table border="1"> <thead> <tr> <th>Activity</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>SLEEP</td> <td>25%</td> </tr> <tr> <td>SCHOOL</td> <td>25%</td> </tr> <tr> <td>JOB</td> <td>17%</td> </tr> <tr> <td>HOMEWORK</td> <td>8%</td> </tr> <tr> <td>MEALS</td> <td>8%</td> </tr> <tr> <td>ENTERTAINMENT</td> <td>17%</td> </tr> </tbody> </table>	Activity	Percent	SLEEP	25%	SCHOOL	25%	JOB	17%	HOMEWORK	8%	MEALS	8%	ENTERTAINMENT	17%
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